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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,903	12/16/2003	Toshihiko Ouchi	03500.017662	3907
5514	7590	12/10/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			KANG, JULIANA K	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/735,903	<b>Applicant(s)</b> OUCHI, TOSHIHIKO	
	<b>Examiner</b> Juliana K. Kang	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. Applicant's communication filed on September 23, 2004 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are not persuasive. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

2. Applicant's amendments overcome the drawing, specification and 112 rejection/objection(s) and thus drawing, specification, and 112 rejection/objection(s) are hereby withdrawn.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1, 3-6 and 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (US 2004/0042705 A1, applied during the previous office action) and further in view of applicant's admitted prior art.**

Regarding claims 1, 3, 8-10 and 12, Uchida et al disclose an optical waveguide device comprising an optical waveguide layer (20), electrical wiring layer (16), optical elements (photo emitter [22] and photo detector [52]) mounted on a circuit board for receiving and emitting a light in a direction nearly perpendicular to an optical waveguide direction and an optical reflector having a projection shape (66) (see Figures 1 and 5). Uchida et al further disclose layers of conductive traces for interconnecting electronic components and devices mounted on the board and for electrically connecting the

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optoelectronic emitter and detector devices (see abstract and paragraph [0031]).

However, Uchida et al do not teach a slab-type optical waveguide. Applicant states in the specification in page 2 lines 20-26 that having a slab type waveguide has excellent matching with an LSI chip, or a board or a package having the LSI chip mounted thereto and is easy to be manufactured and also can be freely connected between chips as compared with a system for forming a line-shaped optical waveguide. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a slab type waveguide in Uchida et al instead of the optical fiber to improve coupling efficiency between the waveguide and the chips and to reduce the manufacturing cost as taught by applicant's admitted prior art.

Regarding claims 6 and 13-18, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, these limitations have not been given patentable weight.

Regarding claims 4 and 5, Uchida et al teach differently shaped reflector such as a polygonal pyramid and circular conical surface. The polygonal pyramid shaped reflector would transmit and receive a signal to and from only a partial area within the optical waveguide and the circular conical surface shaped reflector would transmit and receive a signal to and from the whole area within the optical waveguide.

Regarding claim 11, Uchida et al teach having one or more fiber carrier sheets (see paragraph [0015]).

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5. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al and applicant's admitted prior art as applied to claim 1 above, and further in view of Melindo (U.S. Patent 4,845,702).**

As described above, Uchida et al and applicant's admitted prior art teach the claimed invention including using a clock signal. However, Uchida et al do not specifically teach an optical signal that is constituted by a packet signal train formed of a finite pulse train for time division packet switching. Melindo teaches high-speed packet switching eliminates the crosstalk and the network is easy to implement (see column 2 lines 31-50). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a packetized optical signal as taught by Melindo in Uchida et al and applicant's admitted prior art to eliminate the crosstalk and for easier implementation of the networking.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 3-6 and 8-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Juliana Kang', is written over the printed name.

Juliana Kang  
December 3, 2004